UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS

P O Box 1450 Alexandria, Virgima 22313-1450 www.uspto.gov

#### NOTICE OF ALLOWANCE AND FEE(S) DUE

21254 7590 12/22/2009

MCGINN INTELLECTUAL PROPERTY LAW GROUP, PLLC 8321 OLD COURTHOUSE ROAD SUITE 200

VIENNA, VA 22182-3817

EXAMINER ODOM, CURTIS B

PAPER NUMBER

2611
DATE MAILED: 12/22/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730.136	12/09/2003	Mariko Matsumoto	NEG-325US	3191

 ${\tt TITLE~OF~INVENTION:~WIRELESS~APPARATUS~EMPLOYING~MULTI-LEVEL~QAM~AND~METHOD~FOR~ESTIMATING~THRESHOLD~VALUE}$ 

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	03/22/2010

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT, PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 1SI. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

#### HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and I/2 the ISSUE FIEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

#### PART B - FEE(S) TRANSMITTAL

# Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE

Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where

appropriate. All further indicated unless corrects maintenance fee notifica	correspondence includir ed below or directed oth tions	ng the Patent, advance on herwise in Block 1, by (	rders and notification of a) specifying a new corre	maintenance fees v spondence address	vill be and/o	mailed to the current r (b) indicating a sepa	correspondence trate "FEE ADI	address as DRESS" for
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APPLICATION NO.	FILING DATE		FIRST NAMED INVENTOR		ATTC	RNEY DOCKET NO.	CONFIRMATI	ON NO.
10/730,136	12/09/2003	'	Mariko Matsumoto			NEG-325US	3191	
TITLE OF INVENTION	: WIRELESS APPARA	TUS EMPLOYING MUI	LTI-LEVEL QAM AND	METHOD FOR ES	TIMA	TNG THRESHOLD V	ALUE	
APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSU	E FEE	TOTAL FEE(8) DUE	DATE	DUE
nonprovisional	NO	\$1510	\$300	\$0		\$1810	03/22/	2010
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ODOM, C	CURTIS B	2611	375-264000	,				
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"Fee Address" indication (or "Fee Address" Indication form PIOSB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.  Tegistered attorney or agent) and the names of up to 2 registered attorney or agent. If no name is 3 isied, no name will be printed.								
3. ASSIGNEE NAME A	ND RESIDENCE DATA	A TO BE PRINTED ON	THE PATENT (print or ty	ne)				
PLEASE NOTE: Uni	less an assignee is ident	ified below, no assignee	data will appear on the p	oatent. If an assign	ee is i	lentified below, the d	ocument has be	en filed for
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Please check the appropr	iate assignee category or	categories (will not be p	rinted on the patent):	Individual 🔲 C	orporat	ion or other private gro	oup entity 🚨 G	iovernment
4a. The following fee(s)	are submitted:	4	b. Payment of Fee(s): (Ple	ase first reapply a	ny pre	lously paid issue fee	shown above)	
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Advance Order -	# or Copies		overpayment, to Dep	osit Account Numb	er	(enclose a	n extra copy of t	his form).
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PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.



## UNITED STATES PATENT AND TRADEMARK OFFICE

#### UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS

P O Box 1450 Alexandra, Virgima 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/730,136	12/09/2003	Mariko Matsumoto	NEG-325US 3191		
21254 7	590 12/22/2009		EXAM	UNER	
MCGINN INTELLECTUAL PROPERTY LAW GROUP, PLLC			ODOM, CURTIS B		
8321 OLD COUR	THOUSE ROAD		ART UNIT	PAPER NUMBER	
SUITE 200 VIENNA, VA 22182-3817			2611 DATE MAII ED: 12/22/200	9	

# Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 1136 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 1136 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

# Notice of Allowability

Application No.	Applicant(s)	
10/730,136	MATSUMOTO, MARIKO	
Examiner	Art Unit	
CURTIS B. ODOM	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence addressAll claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included
herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. THIS
NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative
of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

- This communication is responsive to Amdt filed on 12/7/09.
- The allowed claim(s) is/are 1,2,4-26 and 28-51.
- 3. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) 

    All b) 

    Some\* c) 

    None of the:
    - 1. 

      Certified copies of the priority documents have been received.
    - 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_
      - Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
  - \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

- 4. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
- CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a)  $\square$  including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) I hereto or 2) to Paper No./Mail Date \_\_\_\_
  - (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

#### Attachment(s)

- 1. Notice of References Cited (PTO-892)
- 2. 
  Notice of Draftperson's Patent Drawing Review (PTO-948)
- Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date
- Examiner's Comment Regarding Requirement for Deposit of Biological Material
- 5.  $\square$  Notice of Informal Patent Application
- Interview Summary (PTO-413), Paper No./Mail Date .
- 7. 

  Examiner's Amendment/Comment
- 8. X Examiner's Statement of Reasons for Allowance
- 9. 🔲 Other \_\_\_\_

# Allowable Subject Matter

1. The following is an examiner's statement of reasons for allowance: Claims 1, 2, 4-26, and 28-51 are allowable over prior art references because related references do not disclose all the limitations of the claims, in particular, presupposing levels which can be a level of a received data signal and assuming threshold levels based on the presupposed levels, updating the assumed threshold levels, selecting an ultimate threshold values from the assumed threshold levels, wherein selecting the threshold value includes calculating a difference between ratios between low level data and high level data separated by the plural assumed threshold values and a predetermined ratio, and selecting a threshold value with a smaller difference.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance"

### Conclusion

 Any inquiry concerning this communication or earlier communications from the examiner should be directed to CURTIS B. ODOM whose telephone number is (571)272-3046.
 The examiner can normally be reached on Monday- Friday, 9-5:30. Art Unit: 2611

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shuwang Liu can be reached on 571-272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Curtis B. Odom/ Primary Examiner, Art Unit 2611 December 16, 2009